START

0017260
#3

September 16, 1991

Meeting Minutes Transmittal/Approval
Unit Managers Meeting: 200-BP-1 Operable Unit
450 Hills Street, Rm 47
August 15, 1991

From/
Appvl.: _____ Date: 9-12-91
Allan Harris, 200-BP-1 Unit Manager, DOE-RL (A5-19)

Appvl.: _____ Date: 9/19/91
Doug Sherwood, 200-BP-1 Unit Manager, EPA (B5-01)

Appvl.: _____ Date 9/19/91
Larry Goldstein, 200-BP-1 Unit Manager, WA Department of Ecology

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Meeting Minutes are attached. Minutes are comprised of the following:

Attachment #1 - Meeting Summary/Summary of Commitments and Agreements
Attachment #2 - Attendance List
Attachment #3 - Agenda for the Meeting
Attachment #4 - Status of Action Items
Attachment #5 - Porflo Modeling
Attachment #6 - Remedial Investigation Work Progress
Attachment #7 - Briefing Materials, Withdrawal Slug Test at well 699-55-55
Attachment #8 - Spectral Gamma Analysis at Well 216-B-57

Prepared by: Doug Fassett Date: 9/19/91
SWEC Support Services

Concurrence by: _____ Date: 10/16/91
WHC RI Coordinator

200-BP-1 Operable Unit Managers Meeting
August 15, 1991

Distribution:

Donna Lacombe, PRC
Ward Staubitz, USGS
Doug Fassett, SWEC (A4-35)
Linda Powers, WHC (B2-35)
Tom Wintczak, WHC (B2-15)
Mel Adams, WHC (H4-55)
Wayne Johnson, WHC (H4-55)
Rich Carlson, WHC (H4-55)
Brian Sprouse, WHC (H4-22)
Bill Price, WHC (S0-03)
Ralph O. Patt,
OR Water Resources Dept.
Doug Dunster, Golder Assoc.
Mike Thompson, DOE (A6-95)
Diane Clark, DOE (A5-55)
Mark Buckmaster, WHC (H4-55)
Don Praast, GAO (A1-80)

cc. Ronald D. Izatt (A6-95)
Director, DOE-RL, ERD
Donald E. Gerton (A6-80)
Director, DOE-RL, WMD
Roger D. Freeberg (A6-95)
Chief, Rstr. Br., DOE-RL/ERD
Steven H. Wisness (A6-95)
Tri-Party Agreement Proj. Mgr
Richard D. Wojtasek (B2-15)
Prgm. Mgr. WHC
Mary Harmon, DOE-HQ (EM-442)

ADMINISTRATIVE RECORD: 200-BP-1; Care of Susan Wray, WHC (H4-51C)

Please inform Doug Fassett (SWEC) of deletions or additions to the distribution list.

Attachment #1

Meeting Summary and Summary of Commitments and Agreements

200-BP-1 Unit Manager's Meeting
August 15, 1991

1. The status of outstanding Action Items was given by Mark Buckmaster (WHC) (also see Attachment #4).

   2BP1.47: This will be closed today, August 15. A presentation on the progress of risk assessment modeling will be given by Len Collard (WHC).

2. An update on the work plan changes was given by Mark Buckmaster. It was determined that the geophysical logging would be done before the permanent casing is installed in the wells. Also, Mr. Buckmaster said the number of contaminants of concern *for groundwater* would be reduced.

3. Len Collard (WHC) gave an update on the risk assessment modeling (see Attachment #5). A worst case scenario of crib locations in the 200-BP-1 operable unit was modeled. Liquid discharges to the cribs were estimated based on information in the work plans and other information. It appears there is not much lateral spreading occurring in the subsurface. Porflo modeling software is being used to produce the models. Different scenarios will be modeled using different soil characteristics and different contaminants.

4. An update on the Remedial Investigation was given by Mark Buckmaster (see Attachment #6). Inorganic data from near surface soil samples was received. Half of the *first quarter groundwater* data from cyanide and nitrate analyses of samples has been received. The origin of the cyanide plume to the north of 200-BP-1 is unknown.

5. L. Craig Swanson (WHC) presented the results of the withdrawal slug tests at well 699-55-55 (see Attachment #7). The withdrawal slug tests demonstrated a high transmissivity of the soils. This, in combination with the eight inch casing of the well, would make the information from the aquifer test not useful. Therefore, it was proposed that the aquifer test not be done.

6. Work has been stopped three times at the first boring in crib 216-B-49 due to high radiation levels. Readings of 8 Rad/hr beta and *1000 mRem/hr* gamma were found at the waste containment drums. Mark Buckmaster stated that reducing the number of boreholes or sampling locations in crib 216-B-49 should be seriously considered. Allan Harris (DOE-RL) said that Mark Buckmaster should put together information supporting this proposal. A meeting between Doug Sherwood (EPA) and Allan Harris will be scheduled the week of August 19 to discuss the number of boreholes to be drilled.

Action Item #2BP1.48: A proposal for a reduction in the number of boring locations in *the 200-BP-1 Operable Unit* is to be submitted to the regulators. Action: Mark Buckmaster (8/15/91) Request made by Allan Harris. 8/14

7. Due to a request made by Doug Sherwood, a stratigraphic map was made (see Attachment #6).

8. Randall Price (WHC) presented the results of the spectral gamma analysis of well 216-B57-A (see Attachment #8).

9. Mark Buckmaster said funding was *initially* limited for the number of *FY 1991* aquifer pump tests. A total of eight or nine tests are expected to be done. Additional tests may be done in FY 1992. Mr. Buckmaster will provide Ward Staubitz (USGS) with the documentation that supports limiting the number of pump tests. The reasoning and the documentation for the number of aquifer tests will be presented at the next UMM.

Attachment #2

Attendance

200-BP-1 Operable Unit Managers Meeting
August 15, 1991

Name	Org.	O.U. Role	Phone
Allan Harris	DOE-RL	Unit Manager	509-376-4339
Chuck Cline	Ecology	Hydrogeology	206-438-7556
Richard Hibbard	Ecology	CERCLA Unit	206-493-9367
Robert Allender	BCC	Ecology Support	503-244-7005
Pamela Innis	EPA	Unit Manager Rep.	509-376-4919
Drost, Brian	USGS	EPA Support	206-593-6510
Staubitz, Ward	USGS	EPA Support	206-593-6510
Doug Fassett	SWEC	GSSC, DOE-RL	509-376-5011
Bill Fryer	SWEC	GSSC, DOE-RL	509-376-0412
Kathy Knox	CNES	GSSC, DOE-RL	509-376-5011
Diane Shigley	SWEC	GSSC, DOE-RL	509-376-5038
Bill McClung	SWEC	GSSC, DOE-RL	509-376-1853
Mark Buckmaster	WHC	RI Coordinator	509-376-1792
Hal Downey	WHC	ER Program Office	509-376-5539
L. Craig Swanson	WHC	Geosciences	509-376-1438
Steve Trent	WHC	Geosci. Support	509-376-7226
Don Moak	WHC	Drilling	509-376-2312
Anne Kaczor	WHC	RI Asst. Coordinator	509-376-2731
Randall Price	WHC	Logging	509-376-9148
Len Collard	WHC	Risk Assessment	509-376-1032

200-BP-1 UNIT MANAGERS MEETING AGENDA
AUGUST 15, 1991
7:30-9:00 AM
450 HILLS ST., ROOM 47

Introduction:

Status:

Action Items:

Work Plan:

- o Geophysical Logging
- o Parameters of Interest reduction

Remedial Investigation:

- o Risk Assessment Modeling
- o Near Surface Soil Sampling
- o Well Remediation
- o Groundwater Sampling
- o Hydraulic Pump Tests
- o Source and Vadose Sampling

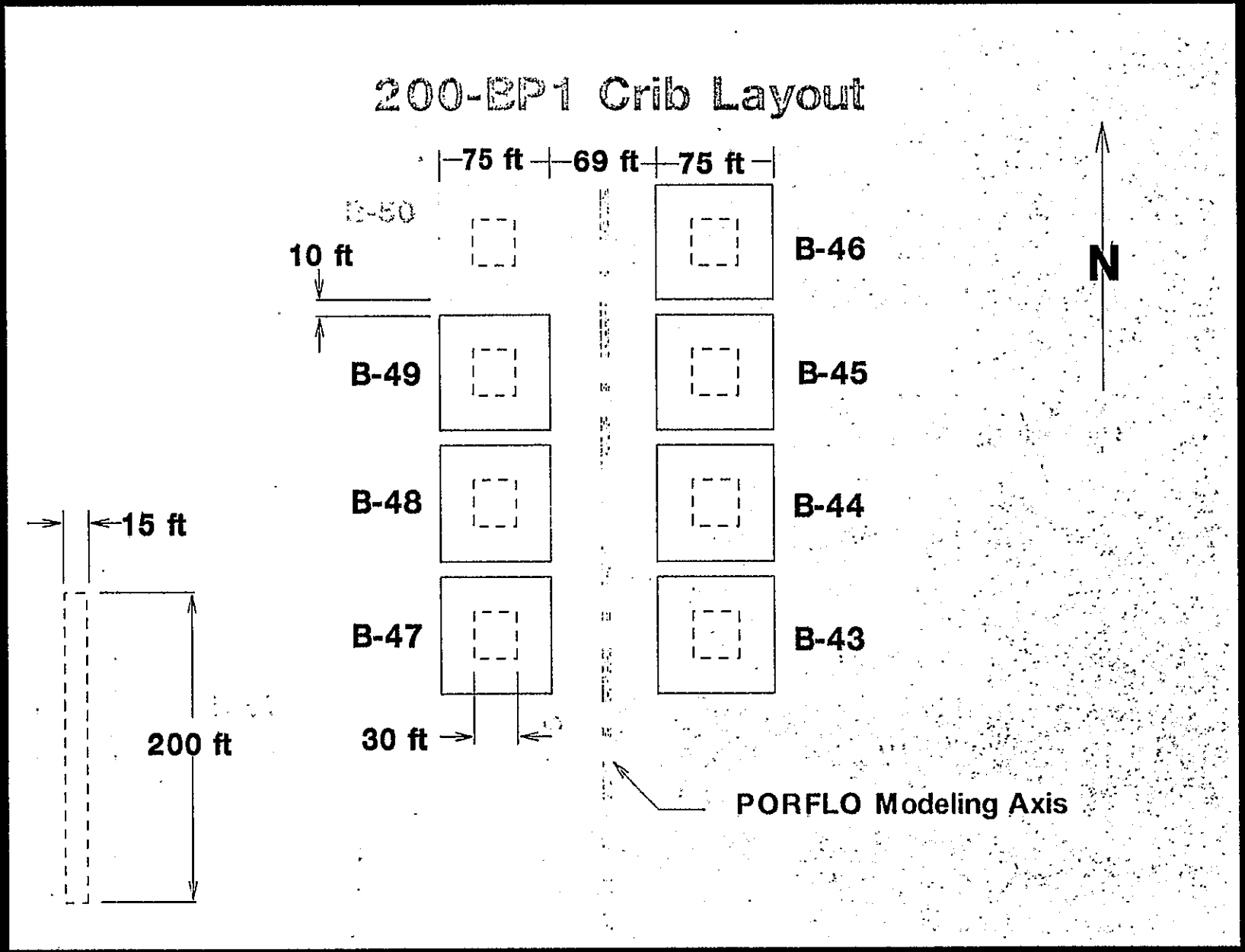
Issues:

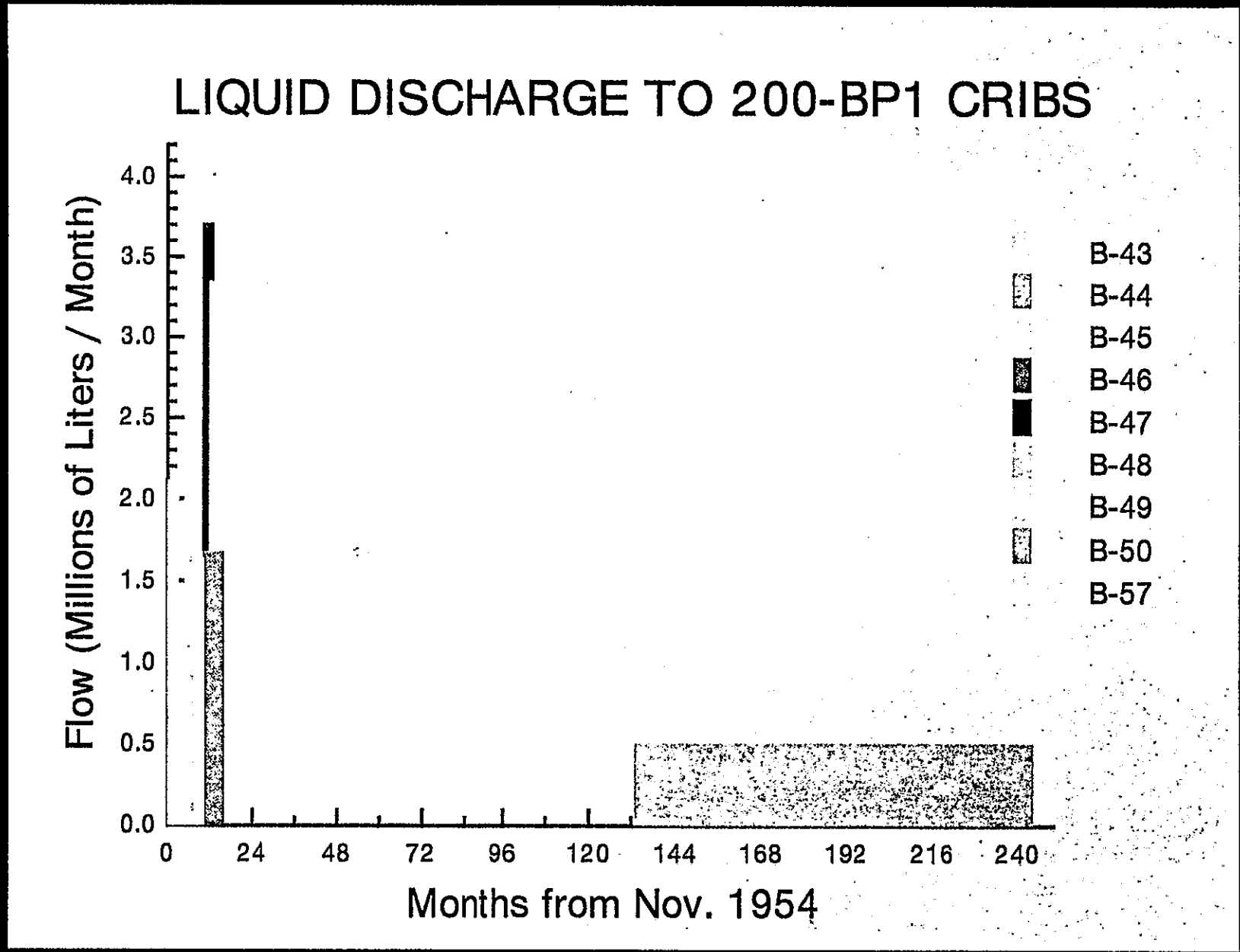
Other Topics:

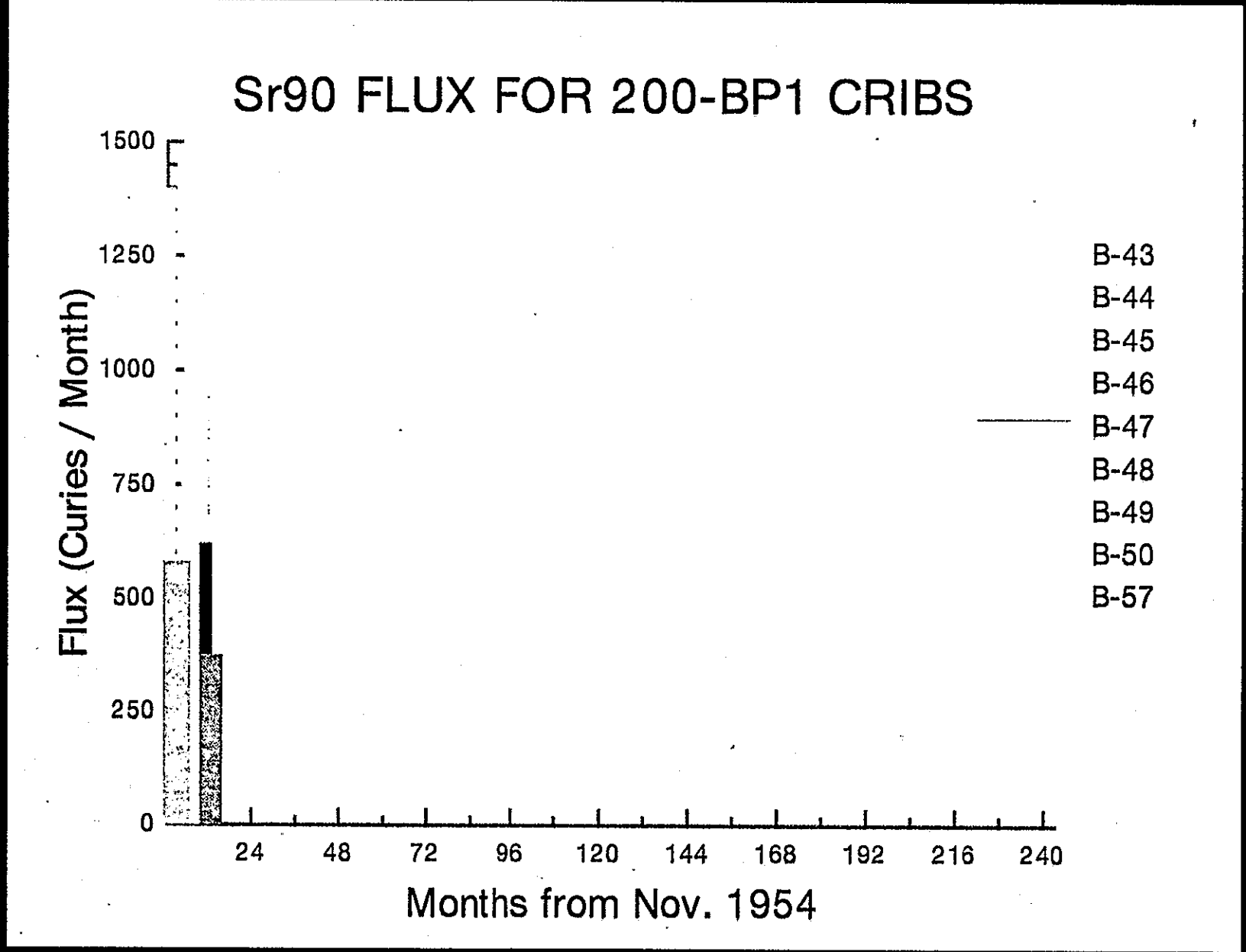
Agreements and Commitments:

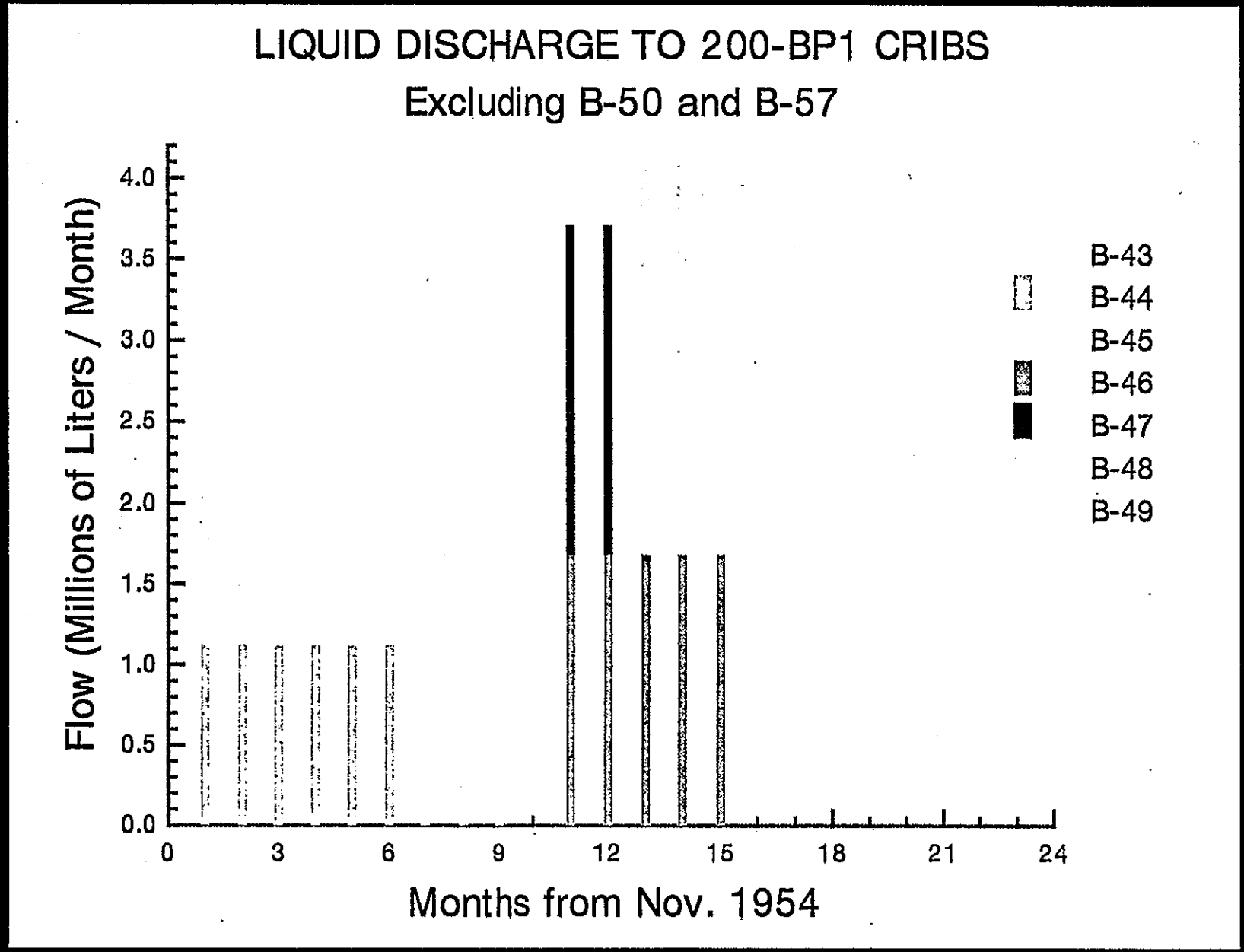
ACTION ITEMS

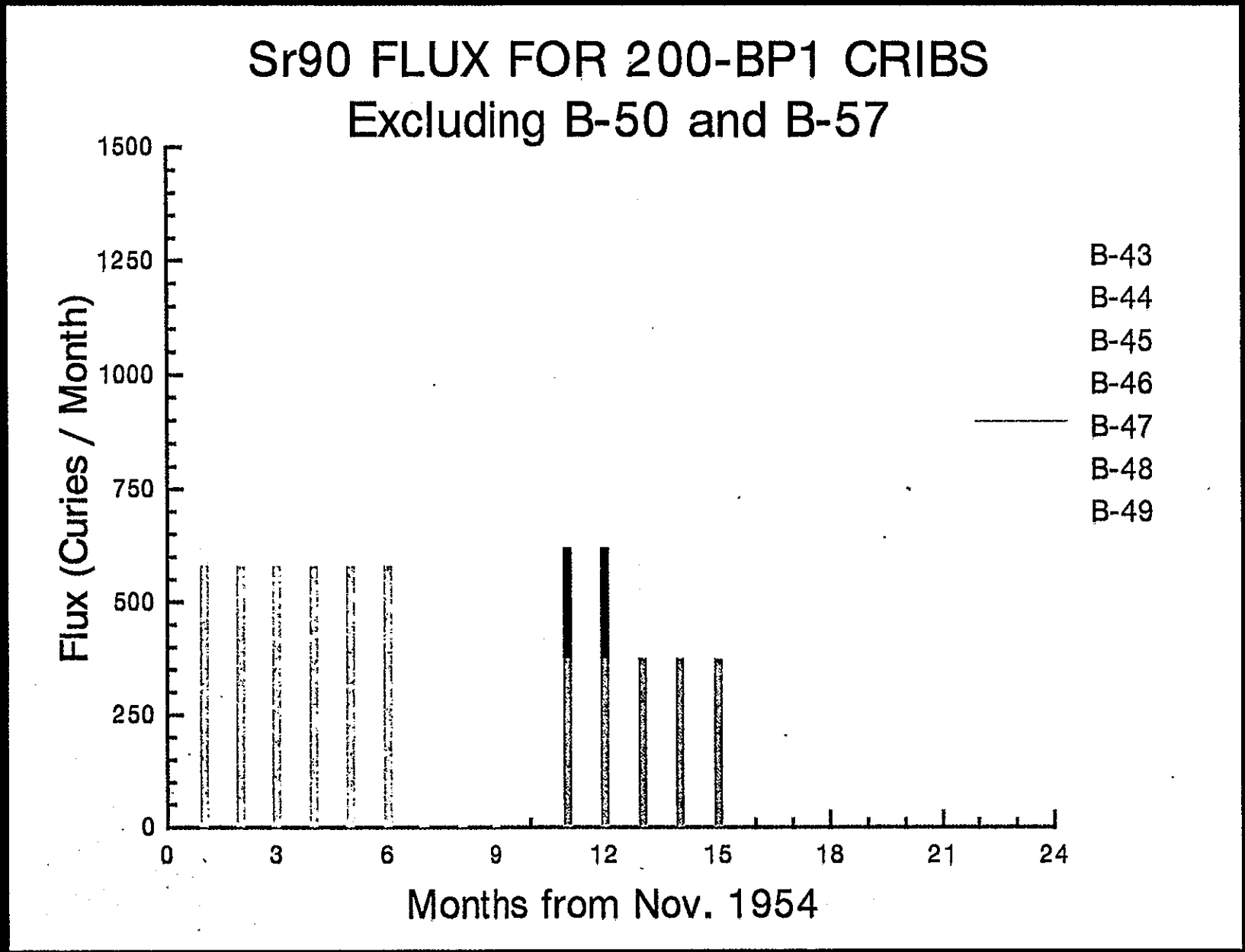
Item Number	Action	Status
2BP1.47	A presentation on the progress of Risk Assessment Modeling. Action: Buckmaster (7/18/91)	Closed August UMM


200-BP1 Crib Layout
75 ft
69 ft
75 ft
B-50
10 ft
B-46
B-49
B-45
B-48
B-44
B-47
B-43
30 ft
N
15 ft
200 ft
PORFLO Modeling Axis


LIQUID DISCHARGE TO 200-BP1 CRIBS
Flow (Millions of Liters / Month)
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
0
24
48
72
96
120
144
168
192
216
240
Months from Nov. 1954
B-43
B-44
B-45
B-46
B-47
B-48
B-49
B-50
B-57

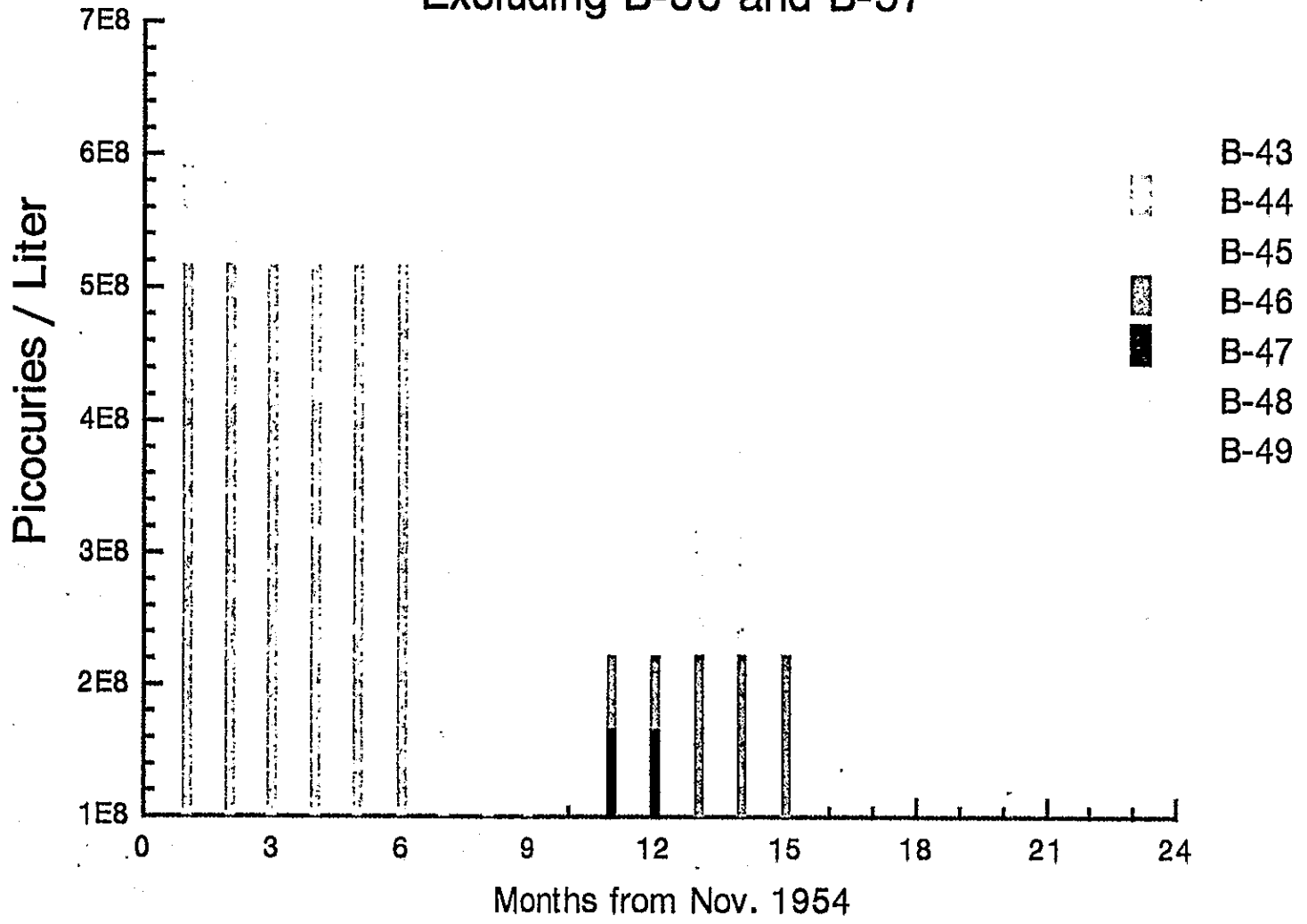

Sr90 FLUX FOR 200-BP1 CRIBS
Flux (Curies / Month)
1500
1250
1000
750
500
250
0
24
48
72
96
120
144
168
192
216
240
Months from Nov. 1954
B-43
B-44
B-45
B-46
B-47
B-48
B-49
B-50
B-57


LIQUID DISCHARGE TO 200-BP1 CRIBS
Excluding B-50 and B-57
Flow (Millions of Liters / Month)
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
0
3
6
9
12
15
18
21
24
Months from Nov. 1954
B-43
B-44
B-45
B-46
B-47
B-48
B-49

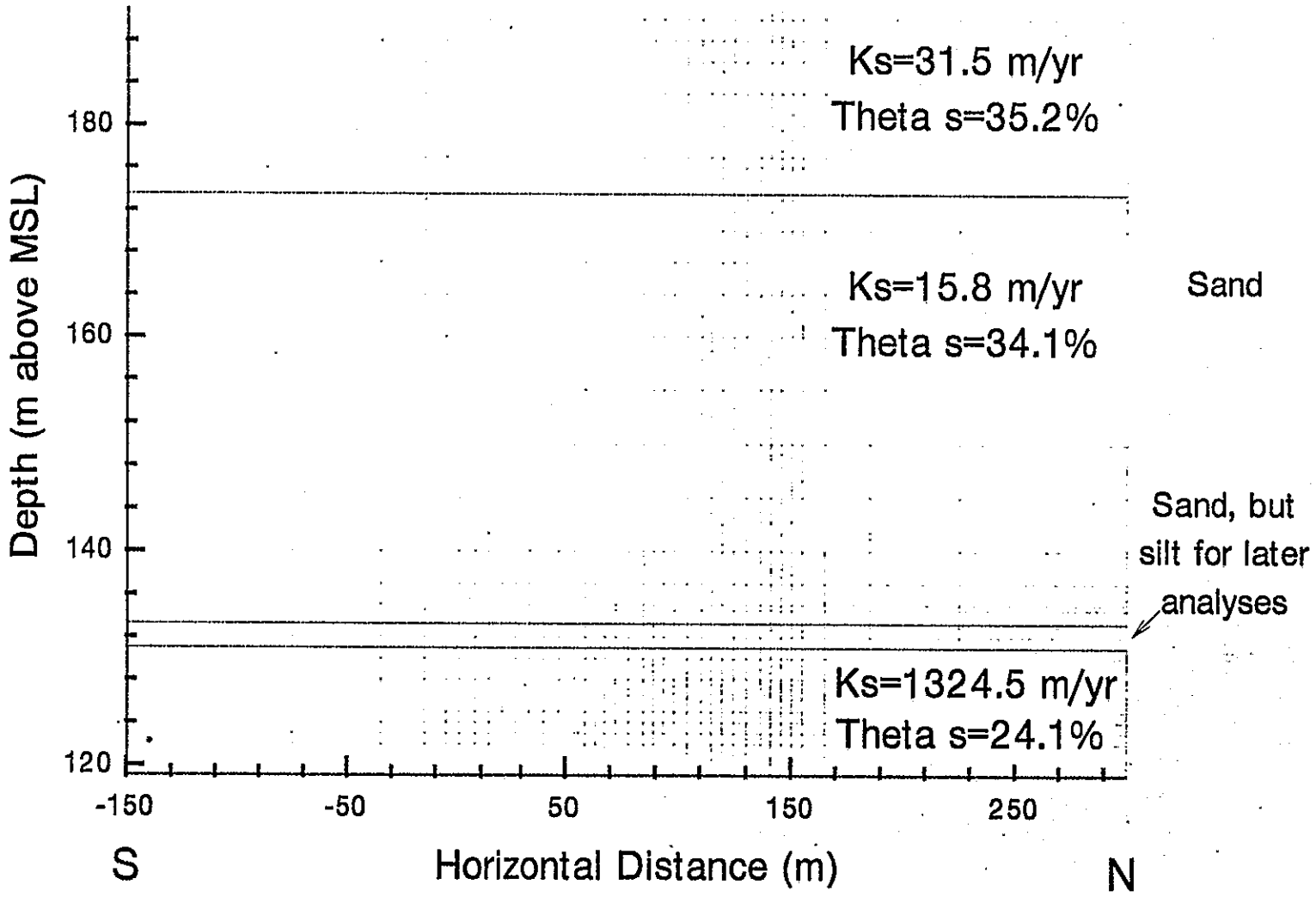

Sr90 FLUX FOR 200-BP1 CRIBS
Excluding B-50 and B-57
Flux (Curies / Month)
1500
1250
1000
750
500
250
0
0
3
6
9
12
15
18
21
24
Months from Nov. 1954
B-43
B-44
B-45
B-46
B-47
B-48
B-49

INITIAL SR90 CONCENTRATIONS FOR 200-BP1 CRIBS

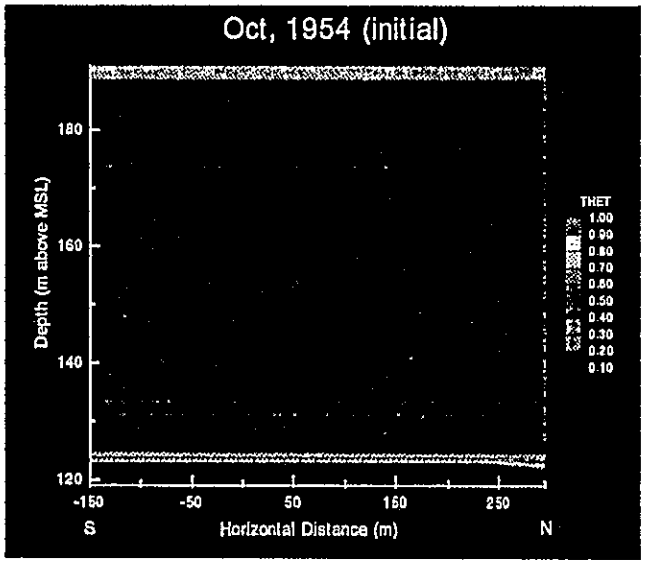
Excluding B-50 and B-57

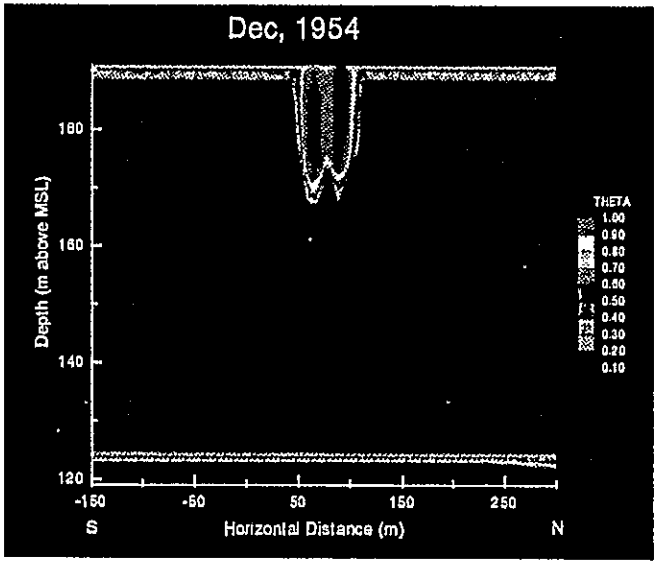


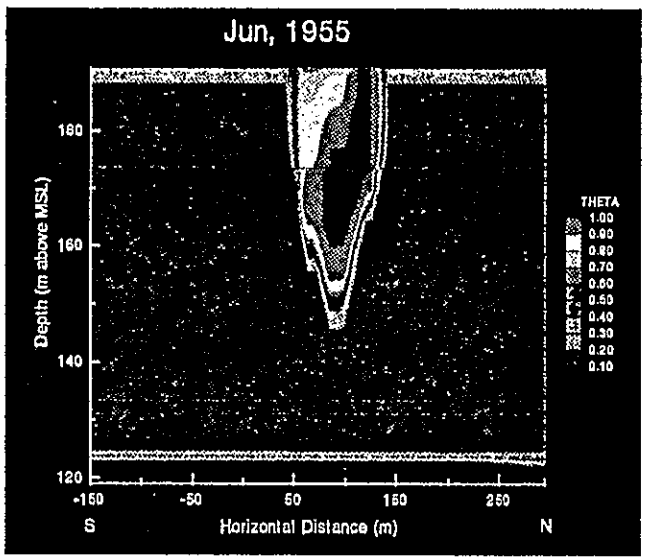
MESH AND SELECTED PROPERTY VALUES

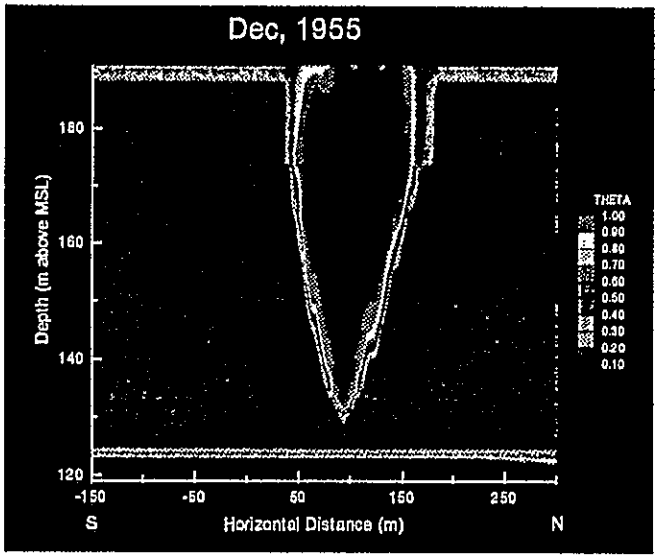


RELATIVE SATURATION - 200 BP1

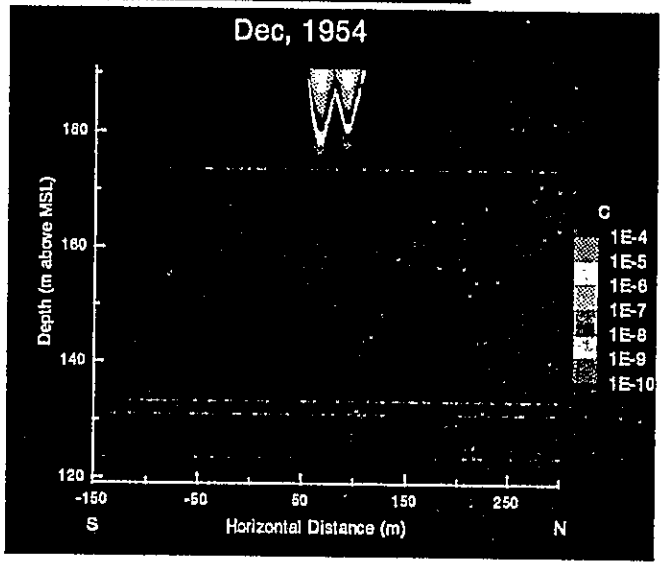


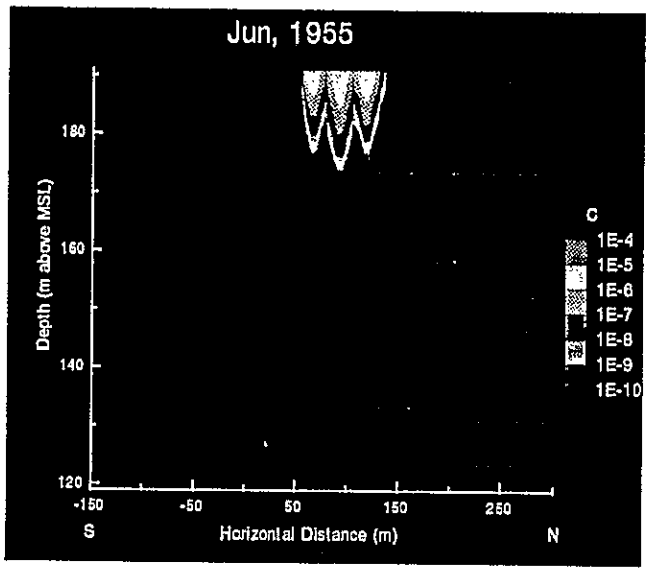


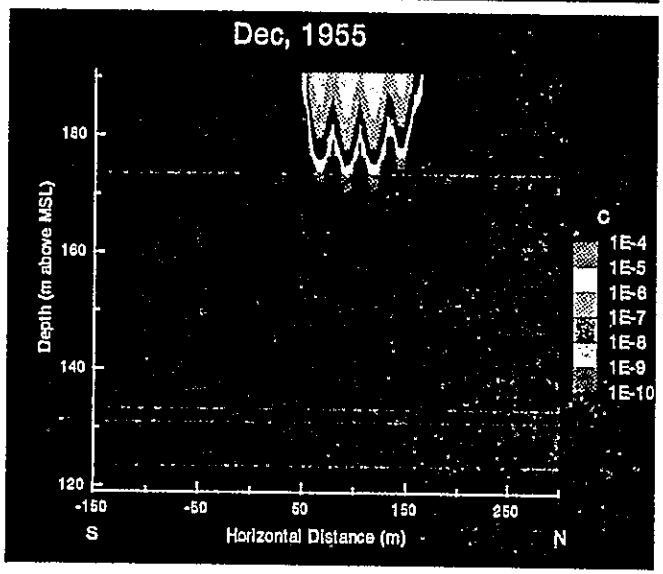




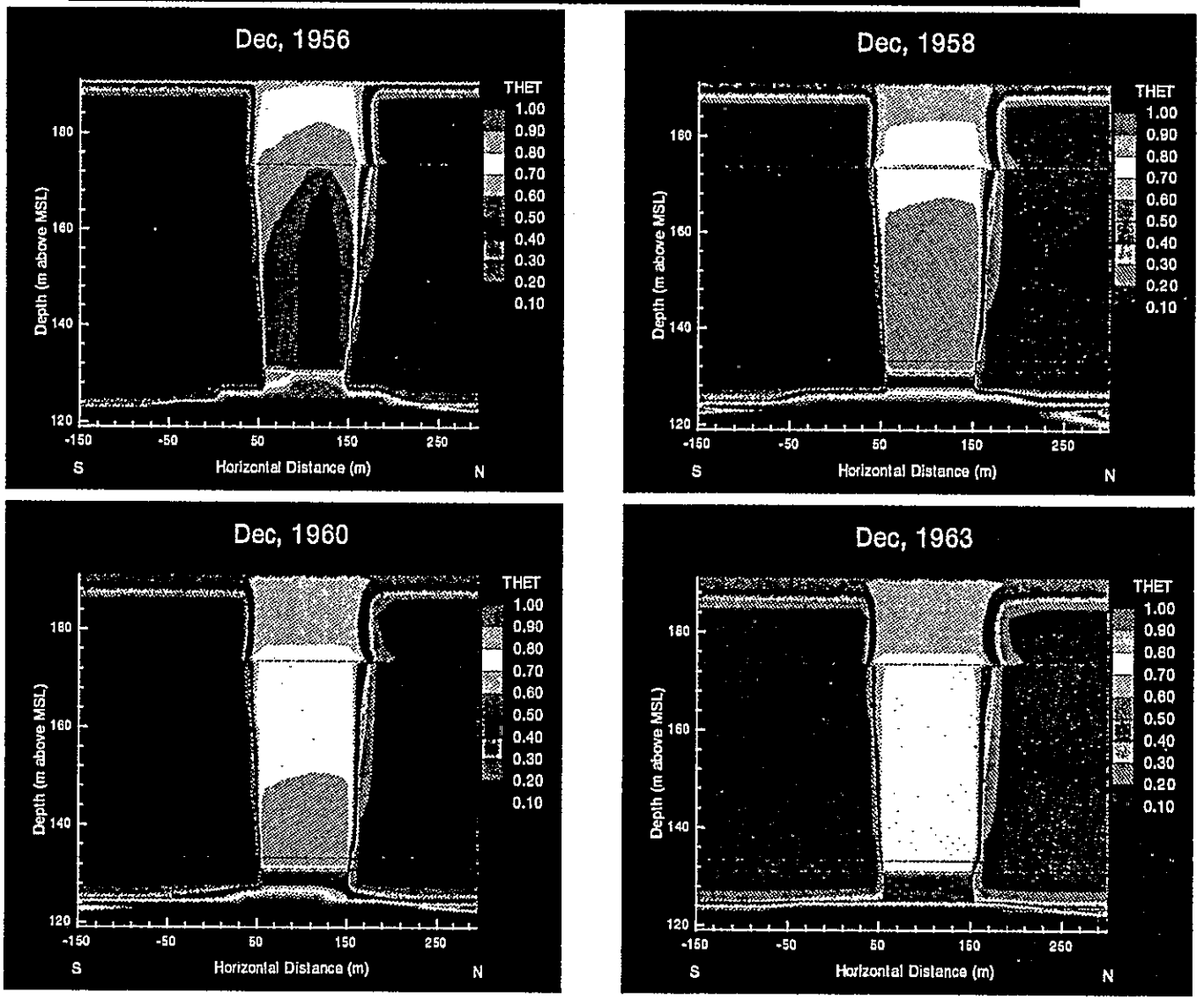
CONCENTRATION - 200 BP1



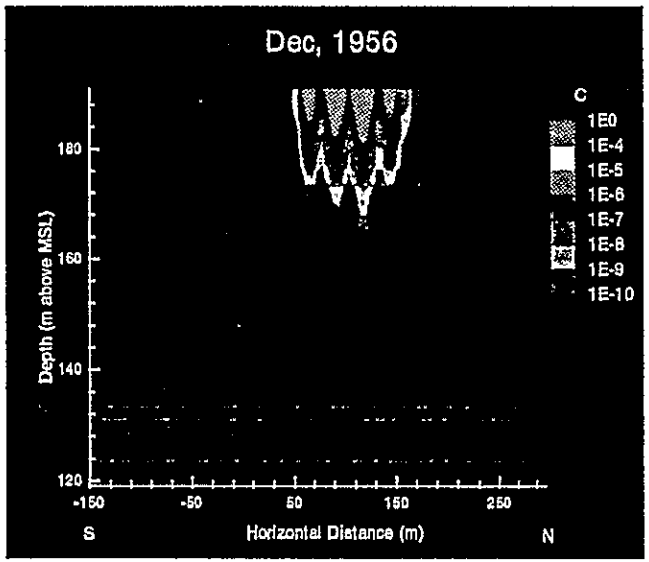


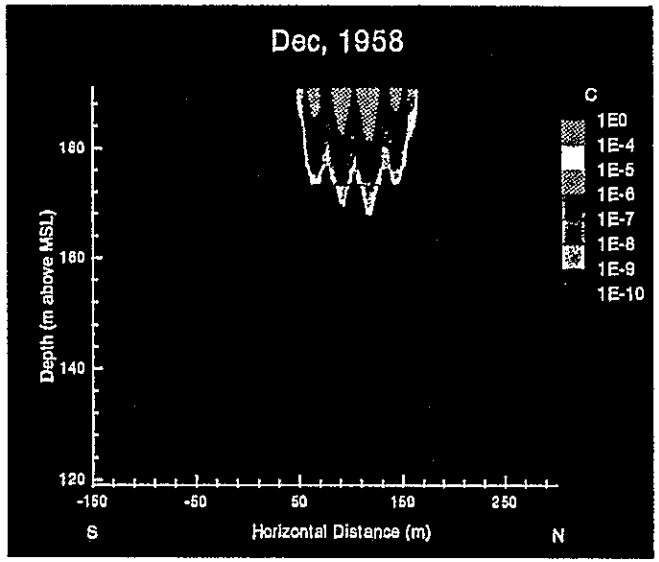


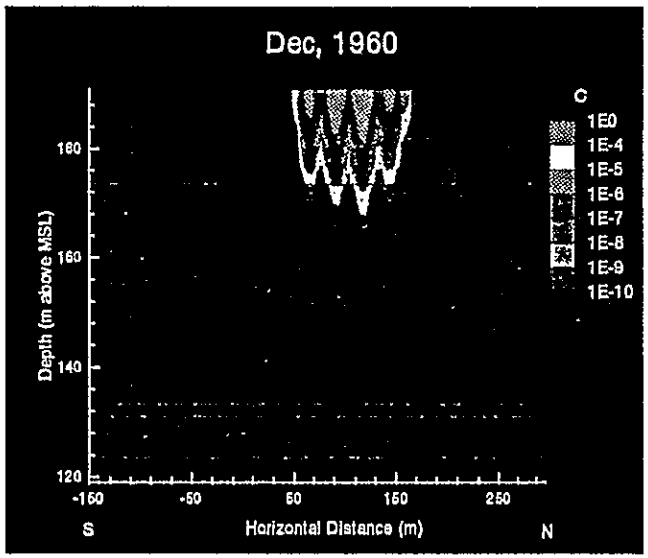
RELATIVE SATURATION - 200 BP1

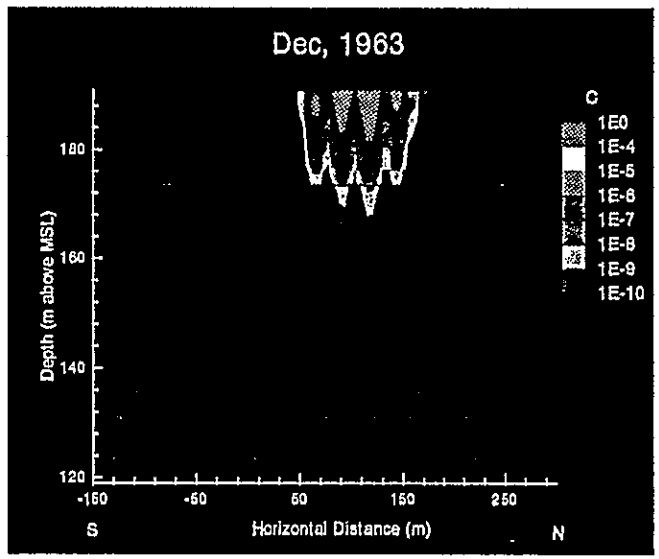


CONCENTRATION - 200 BP1

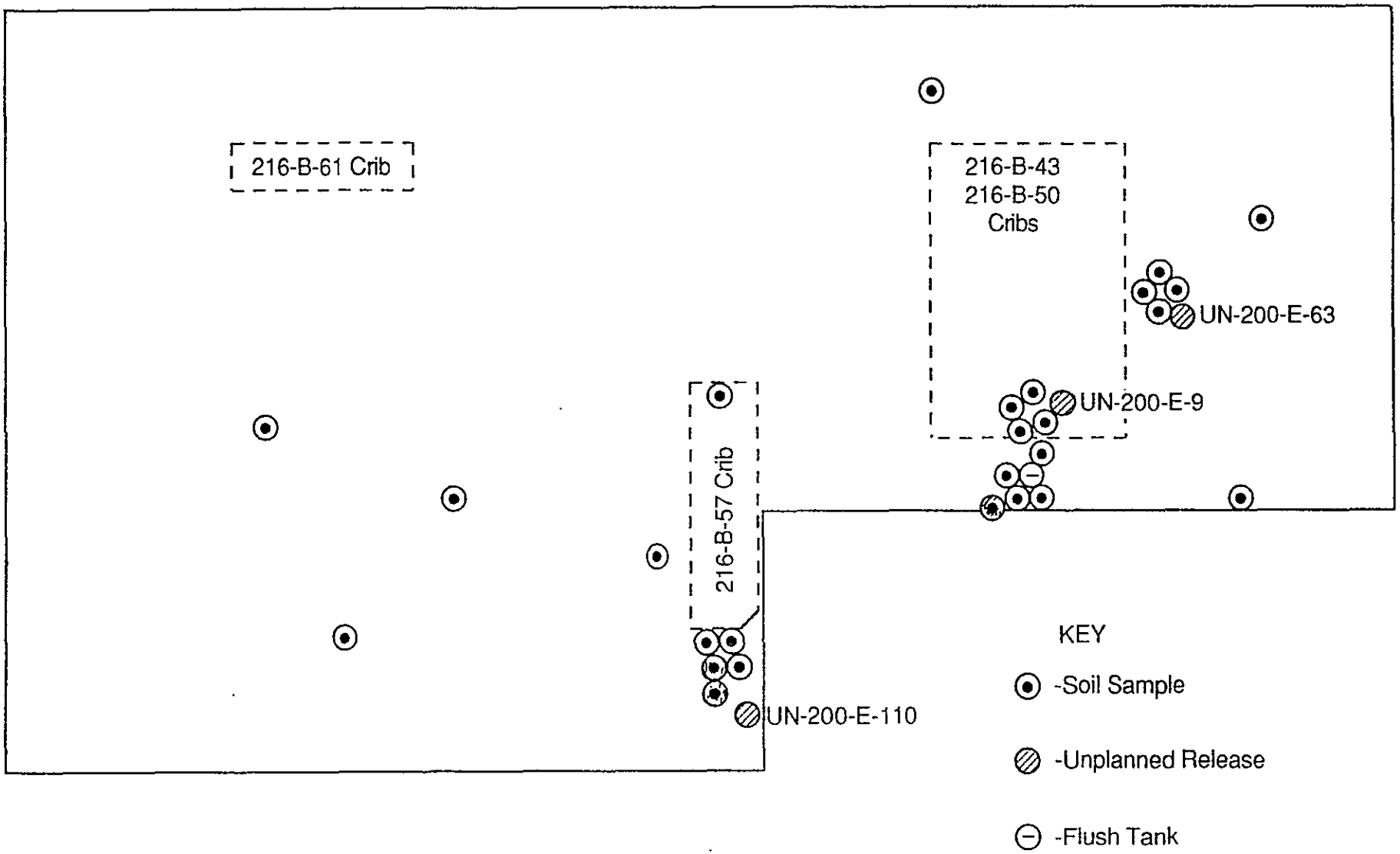








200-BP-1, Task 3, Soil Sample Locations



M080891-B

Sample	Nitrate (mg/kg)	Phosphate (mg/kg)	Sulfate (mg/kg)	Bismuth (mg/kg)	Selenium (mg/kg)	Cyanide (mg/kg)
1	8.2	4.2	2.3	< DL	< DL	< DL
3	7.4	< DL	< DL	< DL	< DL	< DL
4	2.0	< DL	< DL	< DL	< DL	< DL
5	4.5	< DL	< DL	< DL	< DL	< DL
6	23.1	< DL	< DL	< DL	< DL	< DL
7	< DL	< DL	< DL	< DL	< DL	< DL
8	< DL	< DL	< DL	< DL	< DL	< DL
9	< DL	< DL	< DL	< DL	< DL	< DL
10	< DL	< DL	< DL	< DL	< DL	< DL
11	6.4	< DL	< DL	< DL	< DL	< DL
12	7.6	< DL	< DL	< DL	< DL	< DL
13	2.7	< DL	< DL	< DL	< DL	< DL
14	1.3	< DL	< DL	< DL	< DL	< DL
15	7.8	2.7	< DL	< DL	< DL	< DL
16	< DL	< DL	< DL	< DL	< DL	< DL
17	8.5	< DL	< DL	< DL	< DL	< DL
18	< DL	< DL	< DL	< DL	< DL	< DL
19	5.0	< DL	< DL	< DL	< DL	< DL
20	5.0	1.4	< DL	< DL	< DL	< DL
21	< DL	< DL	< DL	< DL	< DL	< DL
22	26.9	1.9	< DL	< DL	< DL	< DL
23	23.9	1.5	< DL	< DL	< DL	< DL
24	< DL	< DL	< DL	< DL	< DL	< DL
25	< DL	< DL	< DL	< DL	< DL	< DL
26	< DL	< DL	< DL	< DL	< DL	< DL
27	2.9	< DL	< DL	< DL	< DL	< DL

200-BP-1 WELL REMEDIATION

1. Support groups have been identified and work is scheduled to begin August 26.

2. Over drilling to install surface seals will begin in the 600 Area.

200-BP-1 GROUNDWATER WELL SAMPLING

STATUS-August 14, 1991

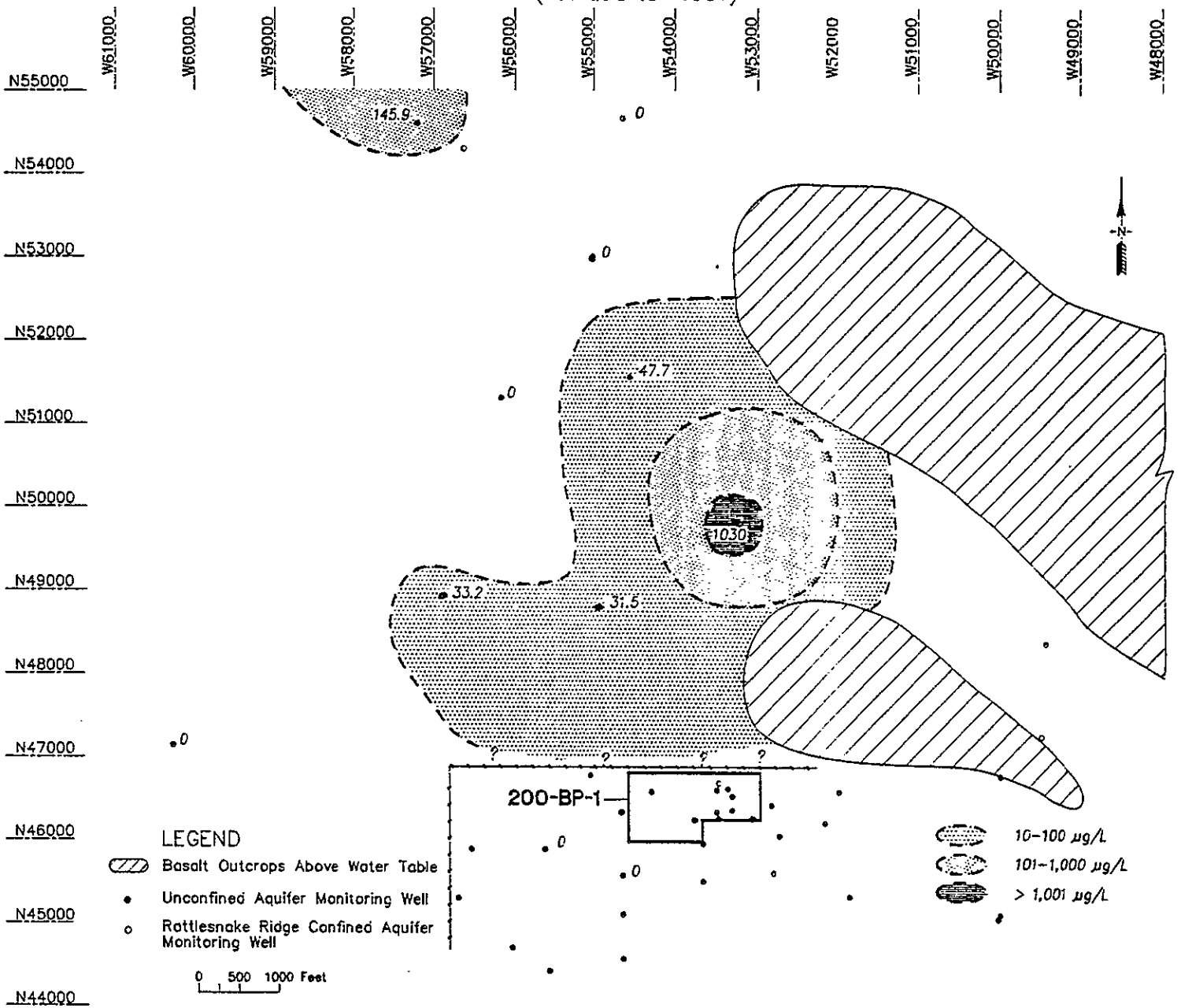
1. The third quarter of groundwater sampling began August 5 and approximately half of the wells have now been sampled.

2. Analytical Data:

   - o Approximately 3/4 of the first quarter data has been submitted.
   - o Initial evaluation of the organic data indicates all analytes less than detection limits.
   - o Inorganic data

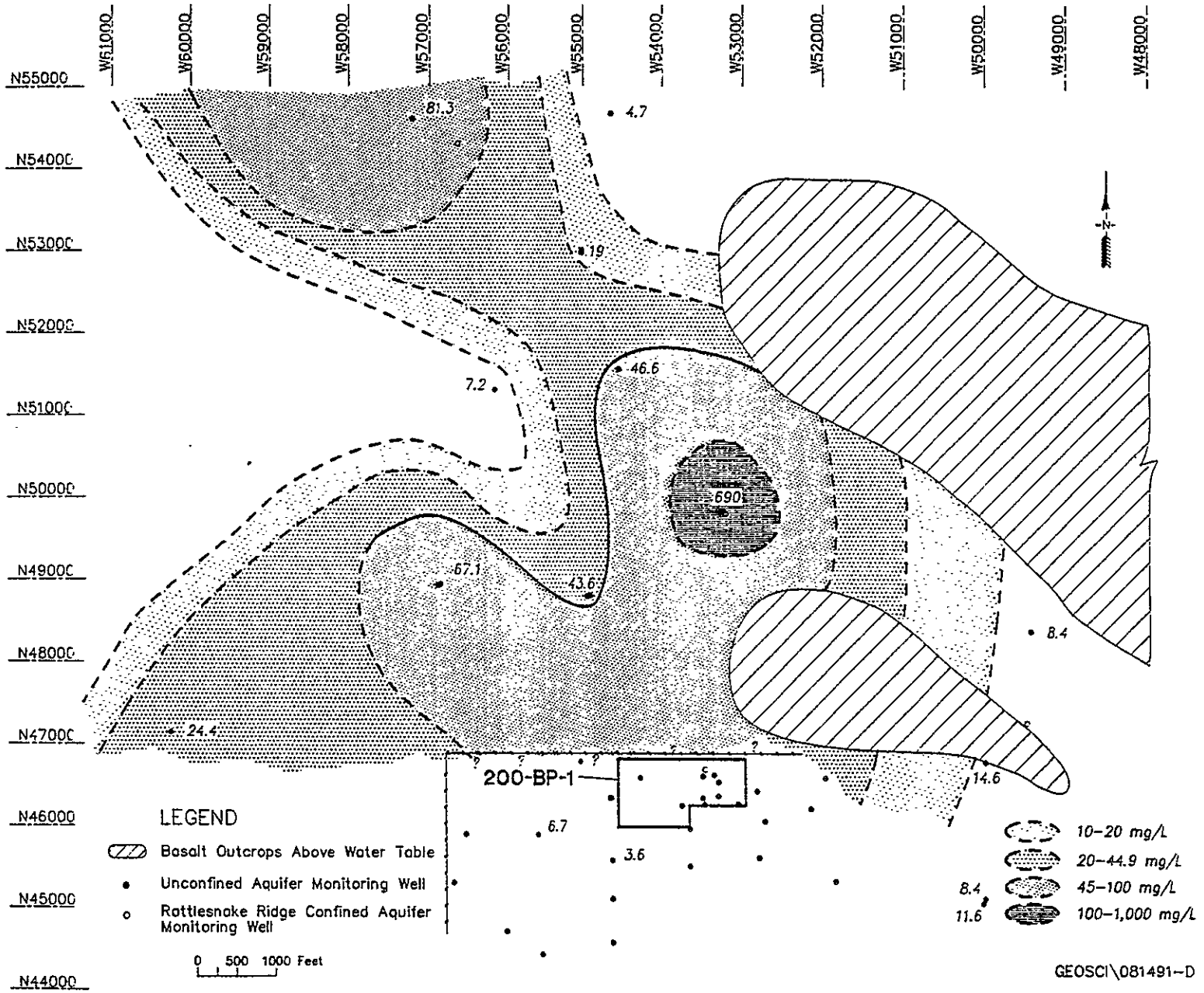
PRELIMINARY PLUME MAP - FREE CYANIDE

(1st Quarter 1991)



GEOSCI\081491-E

PRELIMINARY PLUME MAP - NITRATE
(1st Quarter 1991)



HYDRAULIC PUMP TESTS

1. Aquifer testing has been completed on well 699-52-57. Data is now being evaluated.

2. Tests on wells 699-52-54 and 699-49-57B are scheduled to begin in the next 2 weeks.

3. Test plans are currently being prepared for well 699-~~50-53C~~ 53-55C.

4. Well 699-55-55.

SOURCE AND VADOSE SAMPLING
STATUS-August 14, 1991

216-B-49

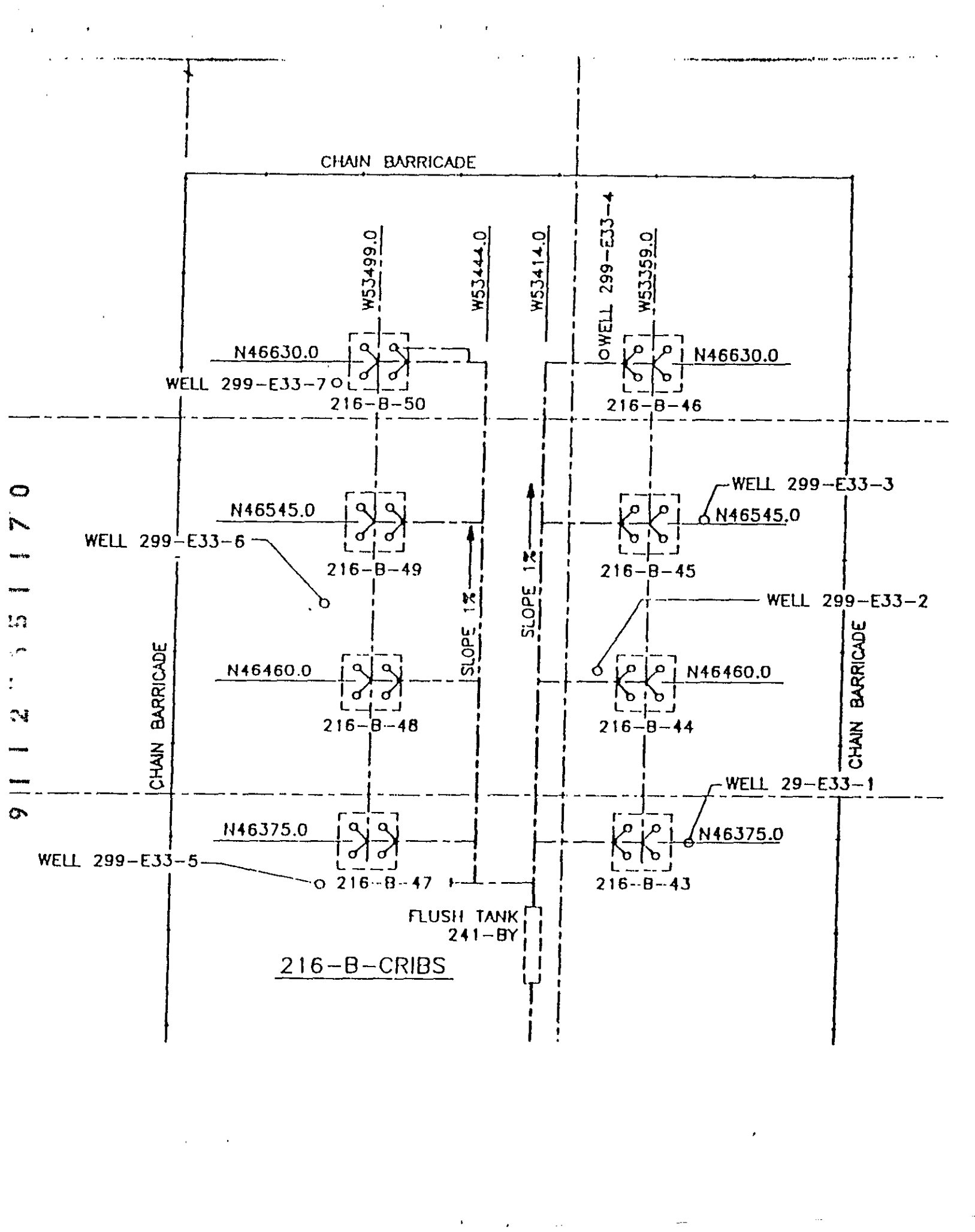
1. Total depth drilled to date is 20 ft.

2. Drilling has been very slow. High radiation levels and encounter with a distribution pipeline.

   - o Discharge pipeline encountered at 12 ft.
   - o GPR was completed on 216-B-43. Initial field results are not encouraging.
   - o Three work stoppages have occurred due to elevated levels of radiation. Highest levels encountered are 8 Rad/hr beta and 1 Rem/hr gamma.
   - o Recovery plan is now being prepared and work may begin sometime next week.

3. Issues:

   - o Health and safety concerns due to the exposure rates.
   - o Waste storage and disposal.
   - o Uncertainty of discharge pipeline locations.
   - o Seriously consider reducing the number of boreholes or sampling locations.


CHAIN BARRICADE
W53499.0
W53444.0
W53414.0
WELL 299-E33-4
W53359.0
N46630.0
WELL 299-E33-7
216-B-50
N46630.0
216-B-46
WELL 299-E33-3
N46545.0
N46545.0
WELL 299-E33-6
216-B-49
216-B-45
SLOPE 1%
SLOPE 1%
WELL 299-E33-2
CHAIN BARRICADE
N46460.0
N46460.0
216-B-48
216-B-44
CHAIN BARRICADE
WELL 29-E33-1
N46375.0
N46375.0
WELL 299-E33-5
216-B-47
216-B-43
FLUSH TANK
241-BY
216-B-CRIBS
9 1 1 2 3 5 1 1 7 0

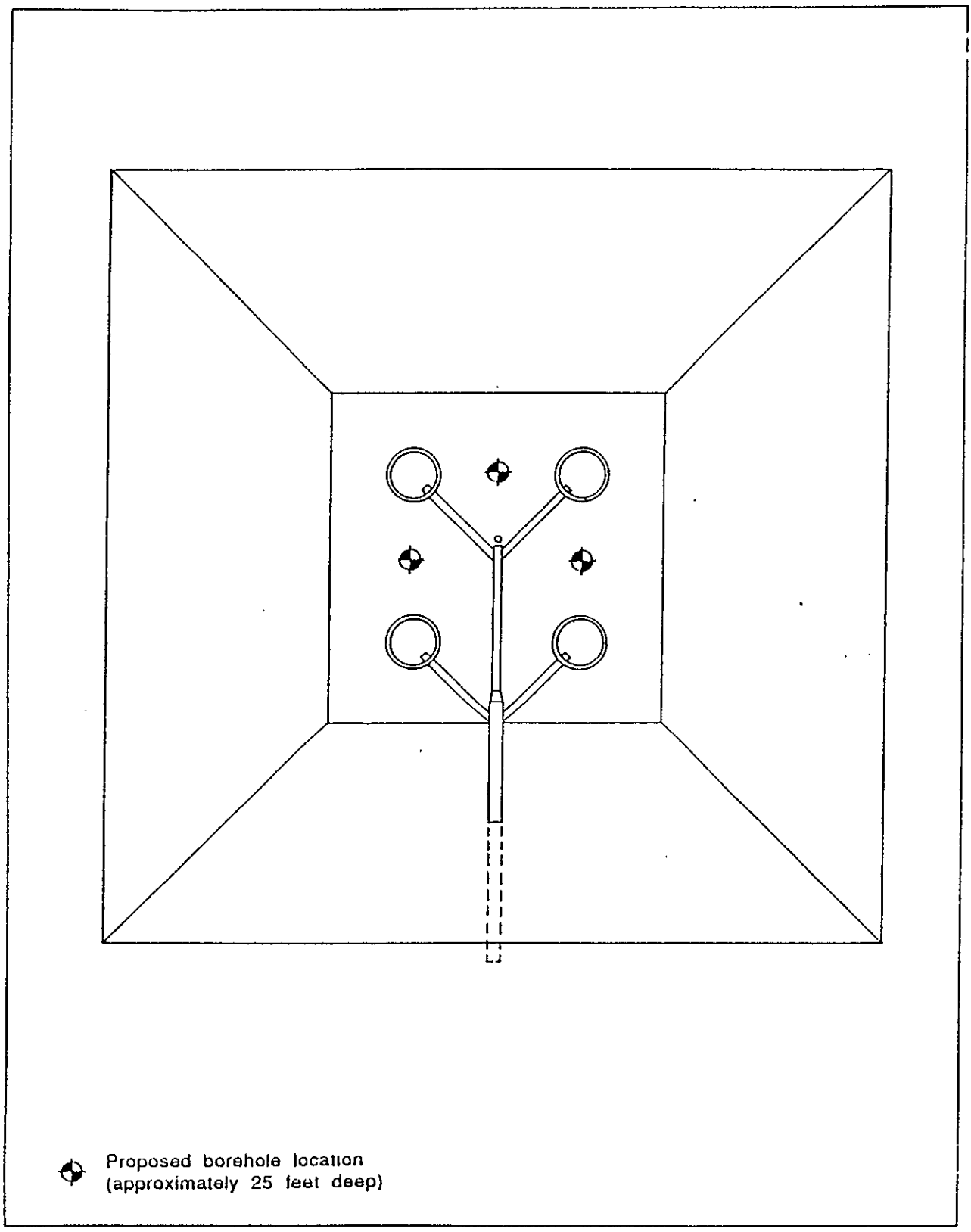
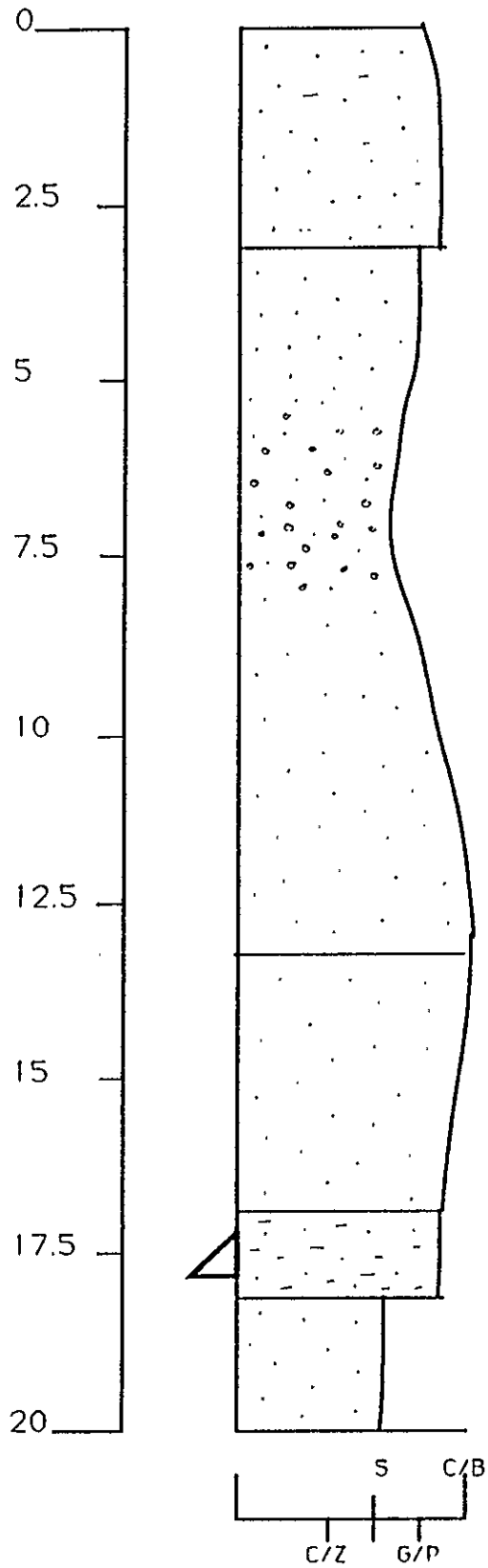


Figure 28. Task 2 Borehole Locations for Source Sampling in Cribs 216-B-43 through -50.

216-B-49(A) 200-BP-1



Distribution pipe (14')
Crib Gravel (13.5'-17')

Sample #	Activity
3.0'-5.5'	<50 pci/g (Chemical sample)
8.5'-11'	<50 pci/g (Chemical sample)
15'-18'	Cs_{137} 23 nci/g Sr_{90} 35 nci/g (physical sample)
18'-20'	Cs_{137} 32 nci/g Sr_{90} 35 nci/g (chemical sample)

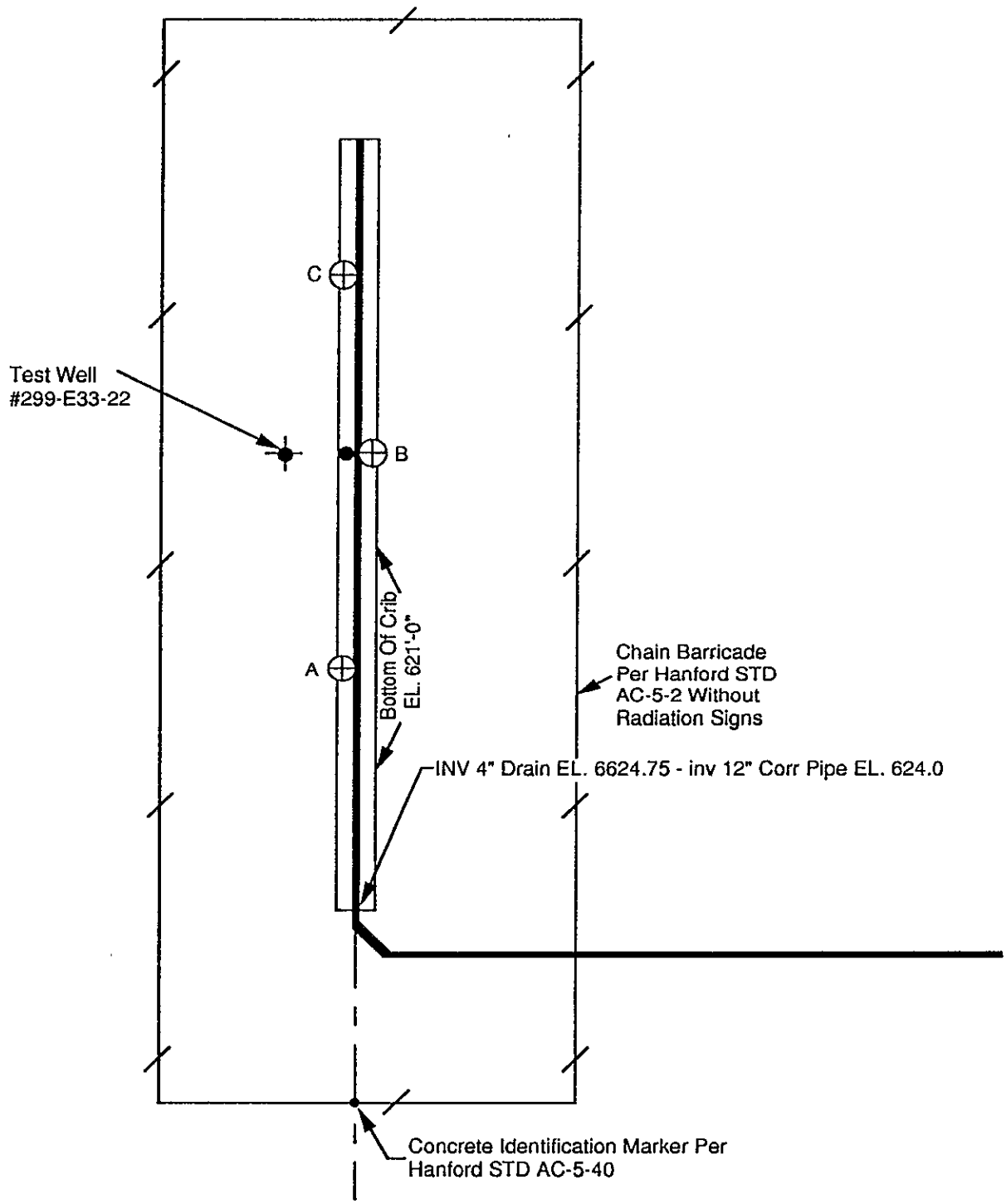
216-B-57

1. Total depth drilled to date is 169 ft. Borehole may be completed late next week.

2. No contamination has been encountered since 39 ft.

3. Reduction of Task 2 boreholes.

Crib 216-B-57

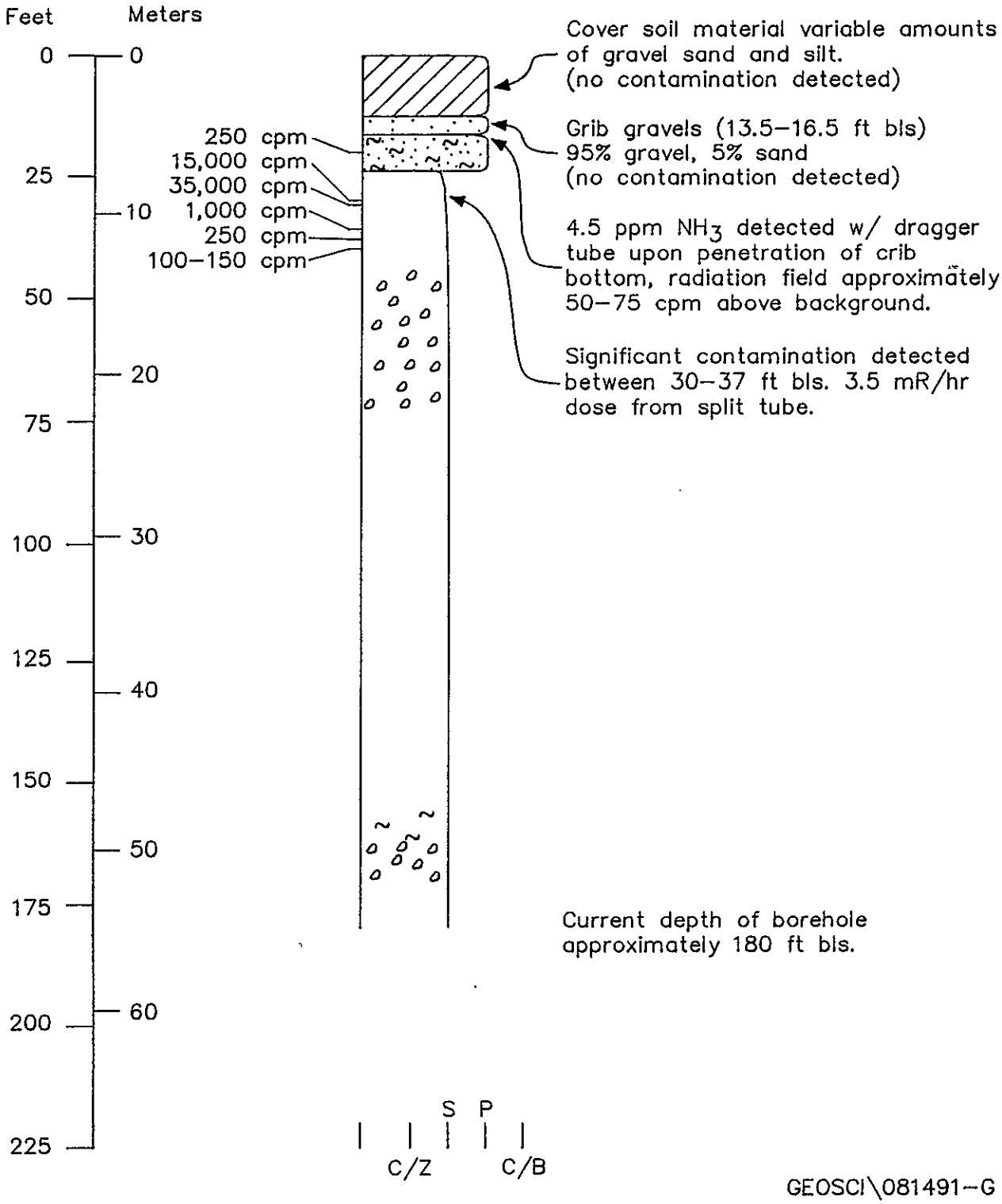


⊕ Borehole Locations

BUCK/M071791-A

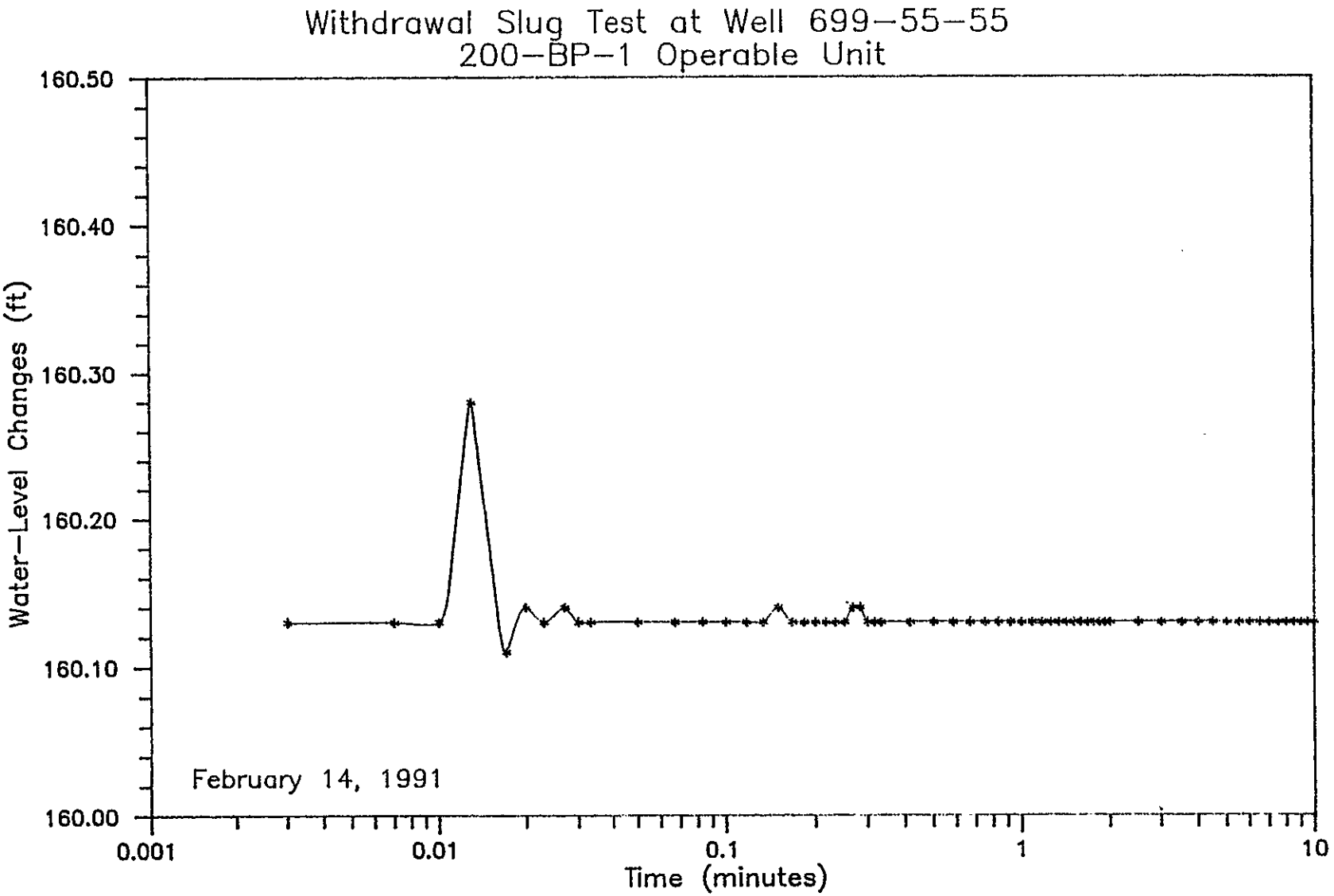
BOREHOLE 216-B-57A

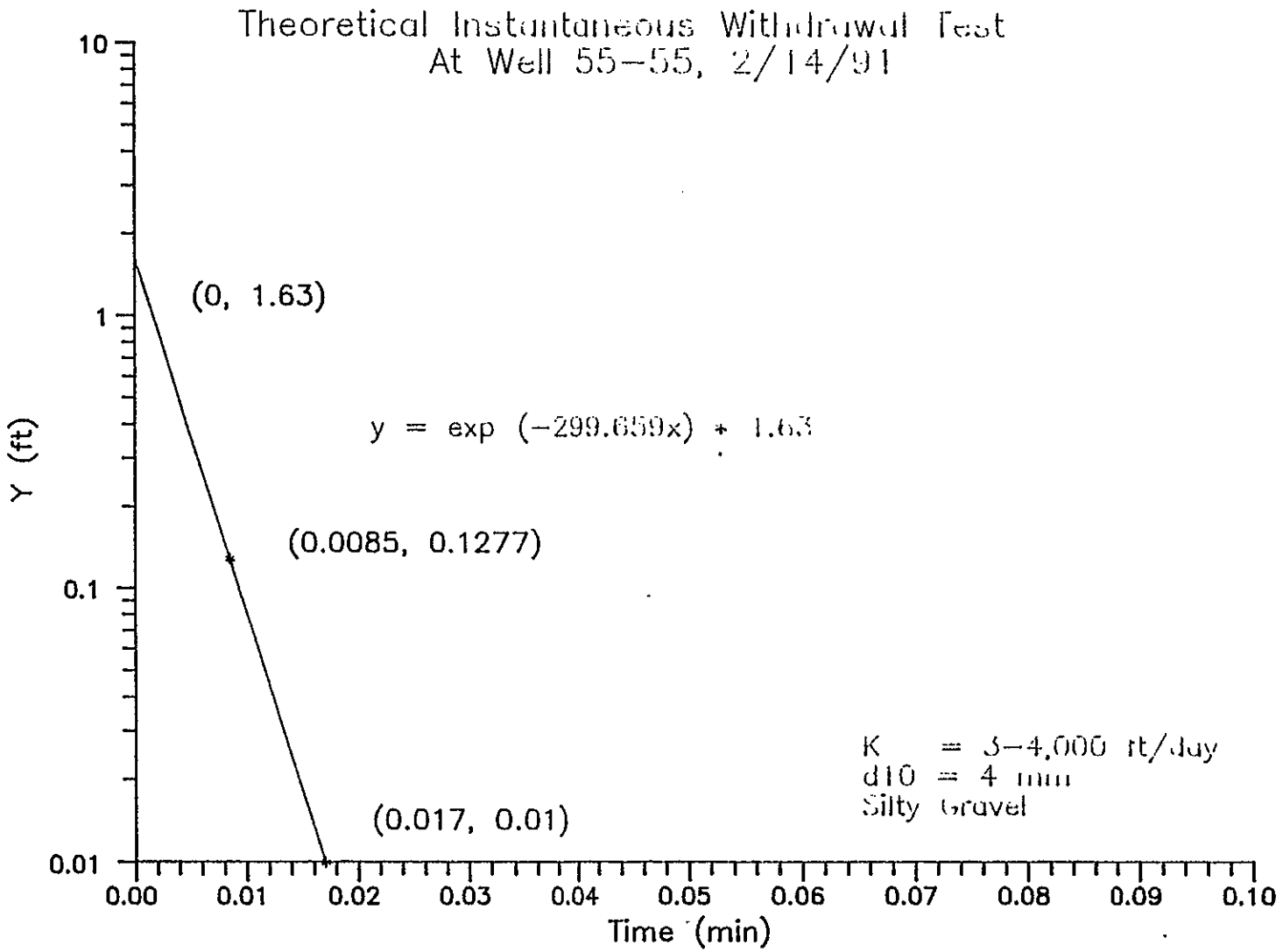
(Background Radiation Field Approximately 100 cpm)



GEOSCI\081491-G

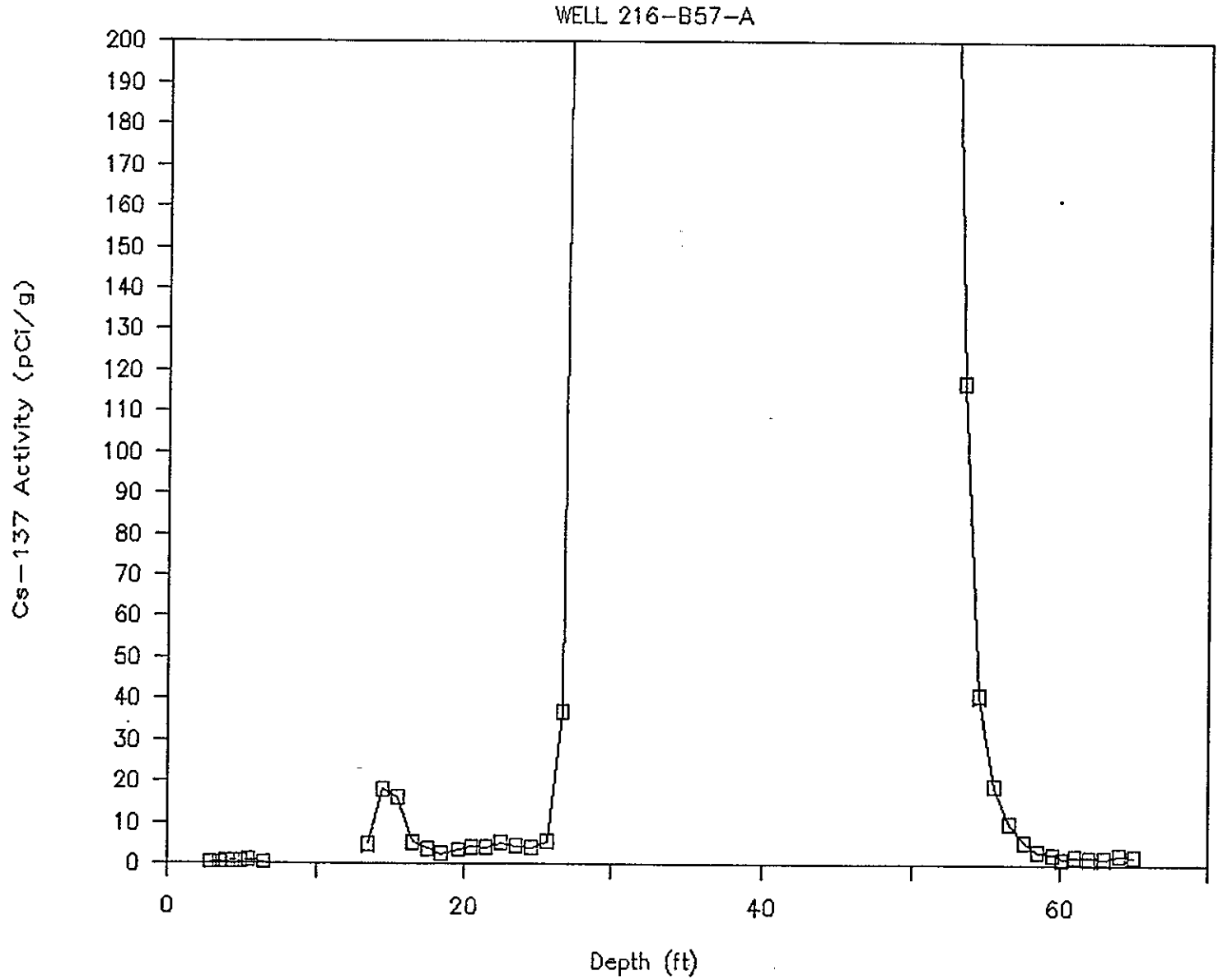
Cotterd


Withdrawal Slug Test at Well 699-55-55
200-BP-1 Operable Unit
160.50
160.40
160.30
160.20
160.10
160.00
Water-Level Changes (ft)
February 14, 1991
0.001
0.01
0.1
1
10
Time (minutes)

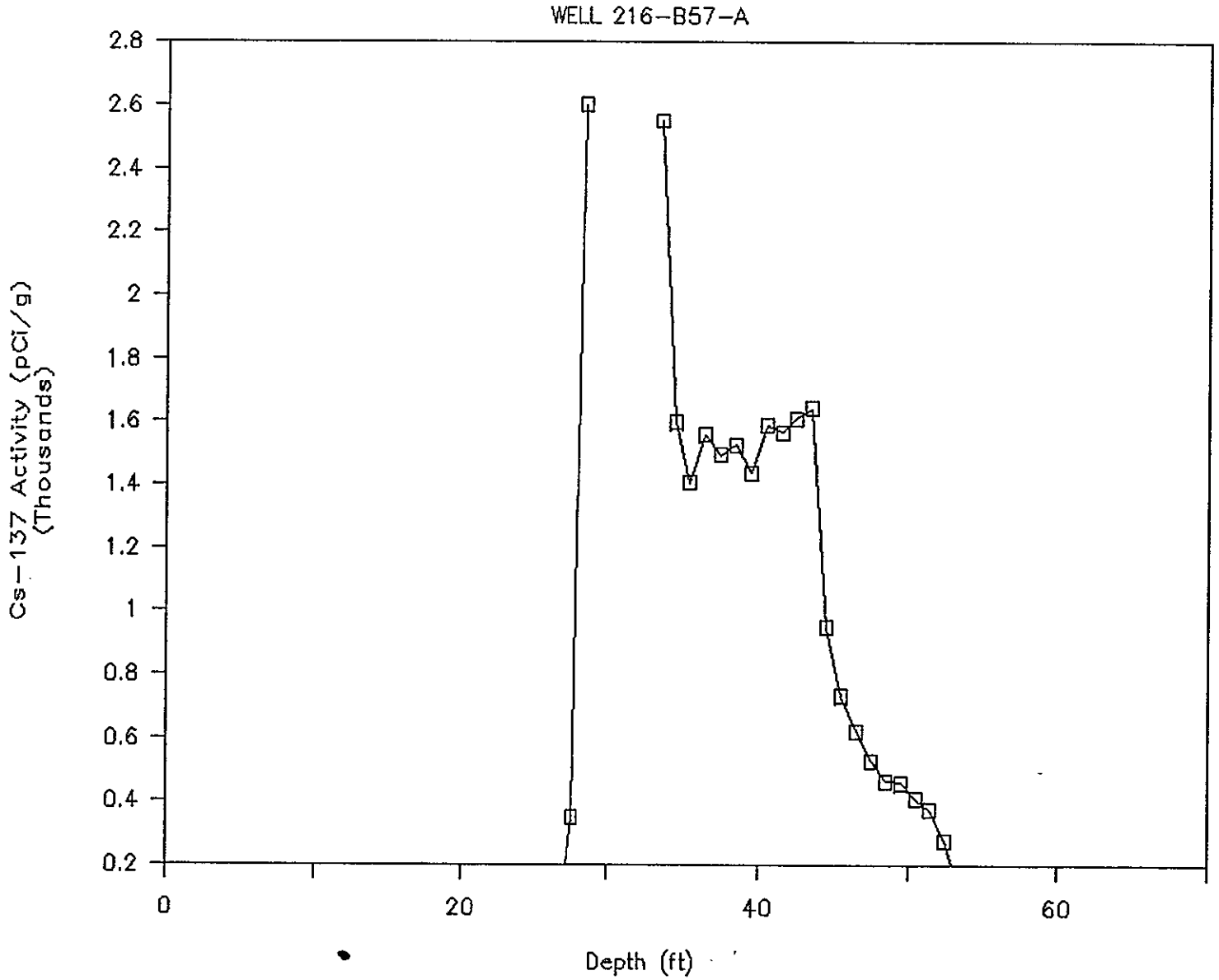

Theoretical Instantaneous Withdrawal Test
At Well 55-55, 2/14/91
10
1
0.1
0.01
Y (ft)
(0, 1.63)
y = exp (-299.659x) + 1.63
(0.0085, 0.1277)
(0.017, 0.01)
K = 3-4,000 ft/day
d10 = 4 mm
Silty Gravel
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.10
Time (min)

Price

Cs-137 PROFILE: 0 - 200 pCi/g



Cs-137 PROFILE: 200 - 2700 pCi/g



Spectral Gamma Analysis of Well 216-B57-A 25 July 91

Depth ft	File	K-40 pCi/g	Th-232 pCi/g	Cs-137 pCi/g
3.5	24	11.4	1.0	0.3
4.5	26	11.2	0.8	0.6
5.5	29	11.8	0.6	0.9
6.5	30	10.3	0.5	0.3
7.5	31	11.6	0.8	-
8.5	32	12.4	0.9	-
9.5	33	12.3	0.4	-
10.5	34	16.5	0.6	-
11.5	35	13.4	0.7	-
12.5	36	14.1	0.9	-
13.5	37	13.6	0.5	4.7
14.5	38	14.2	-	18.
15.5	39	11.9	1.1	16.
16.5	40	12.9	1.2	5.2
17.5	41	10.4	0.5	3.7
18.5	42	13.1	1.1	2.4
19.5	43	12.4	0.6	3.4
20.5	44	15.5	1.2	4.1
21.5	45	13.0	0.6	3.8
22.5	46	14.6	0.7	5.0
23.5	47	15.2	1.1	4.3
24.5	48	21.9	1.0	3.8
25.5	49	19.5	1.1	5.4
26.5	50	16.7	1.8	37
27.5	51	15.2	0.3	352
28.5	52	-	-	2603 > 8 nCi/g
Detector saturation, no valid data acquired				
32.5	56	-	-	8848
33.5	57	14.9	-	2551
34.5	58	16.5	-	1601
35.5	59	20.1	1.1	1470
36.5	60	22.8	0.8	1560
37.5	61	16.0	0.7	1494
38.5	62	17.2	-	1526
39.5	63	17.2	-	1437
40.5	64	20.6	2.4	1589
41.5	65	19.6	-	1567
42.5	66	26.0	1.2	1611
43.5	67	17.9	1.1	1643
44.5	68	20.8	0.9	949
45.5	69	18.8	0.9	732
46.5	70	16.7	0.7	622
47.5	71	22.1	-	527
48.5	72	20.2	-	464
49.5	73	18.8	-	459
50.5	74	16.6	1.1	407
51.5	75	18.7	1.8	372
52.5	76	15.4	-	278
53.5	77	15.3	1.3	117
54.5	78	17.2	0.9	41
55.5	79	20.0	0.6	19
56.5	80	18.3	1.1	10
57.5	81	16.8	0.8	5.5
58.5	82	17.6	0.8	3.2
59.5	83	27.0	1.3	2.5
60.0	84	15.4	1.1	1.5
61.0	85	19.8	0.8	2.0
62.0	86	17.8	0.8	1.7
63.0	87	18.1	0.7	1.6
64.0	88	18.8	1.1	2.4
65.0	89	16.6	1.1	2.0
66.0	90	27.0	1.2	-